







**U.S. DEPARTMENT OF COMMERCE**  
**National Bureau of Standards**  
Boulder, Colorado 80302

January 1974

TO: Cryogenics Division Mailing List

SUBJECT: Announcement of Publications, Supplement No. 2

Gentlemen:

Enclosed is Supplement Number Two to our new list of publications. We just mailed a supplement to you in September, but as you can see we have already added eighteen new publications and seven bibliographies. I would like to particularly call your attention to three rather extensive data compilations (R-790, R-791 and R-792). Monograph 131 (R-790) replaces NBS Circular 556 which was published in 1956 and has been used extensively in the intervening period. The other two compilations will also find a great deal of usefulness as reference volumes.

Included with this mailing is a card which should be returned by any of you with an address change or those who no longer wish to receive these supplements.

You will note also that this issue displays the "logo" we have developed for the Cryogenic Data Center. It is the Greek work "Kryos" which means icy-cold and is the root of Cryogenics.

Sincerely,

A handwritten signature in cursive script that reads "Neil A. Olien".

NEIL A. OLIEN

Acting Chief, Cryogenic Data Center  
Cryogenics Division  
Institute for Basic Standards

Enclosure





NATIONAL BUREAU OF STANDARDS  
INSTITUTE FOR BASIC STANDARDS  
CRYOGENICS DIVISION  
BOULDER, COLORADO 80302

List of Publications, Supplement No. 2  
July to December 1973

NBS - CRYOGENIC DATA CENTER

NOTICE: Copies of these publications may be obtained as indicated by the superscript at the end of each item. The superscripts refer to availability and are listed on page 2.

- R-776 A SURVEY OF COMPATIBILITY OF MATERIALS WITH HIGH PRESSURE OXYGEN SERVICE, by J. G. Hust and A. F. Clark. Cryogenics Vol 13, No. 6, 325-36 (June 1973). (No charge for single copy)<sup>6</sup>
- R-777 A NEW PHASE TRANSITION IN SOLID HYDROGEN?, by H. M. Roder. Cryogenics Vol 13, No. 7, 439-40 (Jul 1973). (No charge for single copy)<sup>6</sup>
- R-778 KAPITZA CONDUCTANCE AND THERMAL CONDUCTIVITY OF COPPER NIOBIUM AND ALUMINUM IN THE RANGE FROM 1.3 TO 2.1 K, by K. Mittag. Cryogenics Vol 13, No. 2, 94-9 (Feb 1973). (No charge for single copy)<sup>6</sup>
- R-779 ANALYSIS OF THE PRESSURE VIRIALS AND CLAUSIUS-MOSSOTTI FUNCTION FOR POLYATOMIC GASES, by J. F. Ely, H. J. M. Hanley and G. C. Straty. J. Chem. Phys. Vol 59, No. 2, 842-8 (Jul 1973). (No charge for single copy)<sup>6</sup>
- R-780 PUBLICATIONS AND SERVICES OF THE NATIONAL BUREAU OF STANDARDS, CRYOGENICS DIVISION, INSTITUTE FOR BASIC STANDARDS, BOULDER, COLORADO 80302 - 1953 - 1972, by J. R. Mendenhall, V. J. Johnson, and N. A. Olien. Nat. Bur. Stand. (U.S.) Tech. Note No. 639, 82 pages (Aug 1973). (C13.46:639 - 75¢)<sup>8</sup>
- R-781 SOME SOUND VELOCITY MEASUREMENTS ON LIQUID FLUORINE, by G. C. Straty and B. A. Younglove. J. Chem. Phys. Vol 58, No. 5, 2191-2 (Mar 1973). (No charge for single copy)<sup>6</sup>
- R-782 HELIUM HEAT TRANSFER, by R. H. Kropschot. Application of Superconducting Cable in Electrical Engineering and High Energy Physics (Proc. Fall Meeting held in Titisee, Germany, sponsored by Kernforschungszentrum, Institut fuer Experimentelle Kernphysik, Karlsruhe, Germany, together with FA Teife Temperaturen der DPG, Oct 9-13, 1972) D-1 - D32. Gesellschaft fuer Kernforschung, Karlsruhe, Germany (1973). (No charge for single copy)<sup>6</sup>
- R-783 TEMPERATURE SCALES, THERMOCOUPLES, AND RESISTANCE THERMOMETERS, by H. H. Plumb, R. L. Powell, W. J. Hall, and J. F. Swindells. American Institute of Physics Handbook, Third Edition, Chap. 4a, 4-2 - 4-21. McGraw Hill, Inc., New York (1972). (No charge for single copy)<sup>6</sup>
- R-784 THERMAL CONDUCTIVITY, by R. L. Powell and G. E. Childs. American Institute of Physics Handbook, Third Edition, Chap. 4g, 4-142 - 4-162. McGraw Hill, Inc., New York (1972). (No charge for single copy)<sup>6</sup>
- R-785 ABILITY OF A CO<sub>2</sub> LASER TO ASSIST ICE BREAKERS, by A. F. Clark, J. C. Moulder, and R. P. Reed. Appl. Opt. Vol 12, No. 6, 1103-4 (Jun 1973). (No charge for single copy)<sup>6</sup>
- R-786 MAGNETORESISTIVITY OF COPPER AND ALUMINUM AT CRYOGENIC TEMPERATURES, by F. R. Fickett. International Conference on Magnet Technology, 4th (Proc. 1972 Conf., Brookhaven National Lab., Upton, N. Y., Sep 19-22, 1972) 539-41. Atomic Energy Commission, Washington, D. C. (1972). (No charge for single copy)<sup>6</sup>
- R-787 PROPERTIES DATA FOR LNG, by D. E. Diller and L. A. Sarkes. Amer. Gas. Assoc. Monthly Vol 55, No. 9, 27-8 (Sep 1973). (No charge for single copy)<sup>6</sup>
- R-788 MEASUREMENT OF rf POWER AND ATTENUATION USING SUPERCONDUCTING QUANTUM INTERFERENCE DEVICES, by R. A. Kamper, M. B. Simmonds, C. A. Hoer, and R. T. Adair. Nat. Bur. Stand. (U.S.), Tech. Note No. 643, 94 pages (Aug 1973). (C13.46:643 - \$1.00)<sup>8</sup>

- R-789 LIQUID-VAPOR EQUILIBRIA RESEARCH ON SYSTEMS OF INTEREST IN CRYOGENICS - A SURVEY, by A. J. Kidnay, M. J. Hiza, and R. C. Miller. Cryogenics Vol 13, No. 10, 575-99 (Oct 1973). (No charge for single copy)<sup>6</sup>
- R-790 THERMAL CONDUCTIVITY OF SOLIDS AT ROOM TEMPERATURE AND BELOW. A REVIEW AND COMPILATION OF THE LITERATURE, by G. E. Childs, L. J. Ericks, and R. L. Powell. Nat. Bur. Stand. (U.S.), Monogr. No. 131, 624 pages (Sep 1973). (C13.44:131 - \$7.80)<sup>3</sup>
- R-791 SURVEY OF THE PROPERTIES OF THE HYDROGEN ISOTOPES BELOW THEIR CRITICAL TEMPERATURES, by H. M. Roder, G. E. Childs, R. D. McCarty, and P. E. Angerhofer. Nat. Bur. Stand. (U.S.), Tech. Note No. 641, 121 pages (Aug 1973). (C13.46:641 - \$1.25)<sup>3</sup>
- R-792 A COMPILATION AND EVALUATION OF MECHANICAL, THERMAL, AND ELECTRICAL PROPERTIES OF SELECTED POLYMERS, by R. E. Schramm, A. F. Clark, and R. P. Reed. Nat. Bur. Stand. (U.S.), Monogr. No. 132, 848 pages (Sep 1973). (C13.44:132 - \$10.25)<sup>3</sup>
- R-793 VISCOSITY OF GASEOUS AND LIQUID ARGON, by W. M. Haynes. Physica Vol 67, No. 3, 440-70 (Aug 1973). (No charge for single copy)<sup>6</sup>
- B-1081 SUPERCONDUCTING MAGNETS. 330 pages, indexed by author (Oct 1973). (\$25.00)<sup>6</sup>
- B-1082 SUPERCONDUCTING MOTORS AND GENERATORS. 36 pages, indexed by author (Oct 1973). (\$5.00)<sup>6</sup>
- B-1083 SUPERCONDUCTING DEVICES FOR MEASURING MAGNETIC FIELD STRENGTH AND DIRECTION. 23 pages, indexed by magnetic field measurement and author (Oct 1973). (\$5.00)<sup>6</sup>
- B-1084 SUPERCONDUCTING DETECTORS (Does Not Include Emission Devices or Amplifiers). 43 pages, indexed by author (Oct 1973). (\$5.00)<sup>6</sup>
- B-1085 SUPERCONDUCTING TRANSFORMERS. 15 pages, indexed by author (Oct 1973). (\$5.00)<sup>6</sup>
- B-1086 SUPERCONDUCTING TRANSMISSION LINES. 37 pages, indexed by subject and author (Oct 1973). (\$5.00)<sup>6</sup>
- B-1087 SUPERCONDUCTING AMPLIFIERS, R-F CAVITIES AND OTHER ELECTRONIC DEVICES. 51 pages, indexed by author (Oct 1973). (\$8.00)<sup>6</sup>

#### AVAILABILITY

<sup>1</sup> Available from National Technical Information Service, Dept. A, Springfield, Virginia 22151 - Price \$3.00 for hard copy; \$1.45 for microfiche. Order by PB No., AD No., or N No.

Available from National Technical Information Service, Dept. A, Springfield, Virginia 22151 - Price \$6.00 for hard copy; \$1.45 for microfiche. Order by PB No., AD No., N No., or BNL No.

<sup>3</sup> Available in hard copy from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at the price indicated. Order by NBS Monogr. No., NBS Spec. Publ. No., NSRDS-NBS No., C13.46 No., NASA Spec. Publ. No., NASA CR No., or other number indicated.

<sup>4</sup> Available in hard copy from the publisher or a bookstore at the price indicated.

Available in hard copy from Commissioner of Patents, U.S. Patent Office, Washington, D. C. 20231, at the price indicated. Order by Patent No.

Available in hard copy from National Bureau of Standards, Cryogenic Data Center, Boulder, Colorado 80302, at the price indicated. Order by R No., MR No., D No., B No., or Paper No. PLEASE INCLUDE SELF-ADDRESSED MAILING LABEL.



